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मानक

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IS 13143 (1991): Joints in concrete lining of canals -
sealing compound [WRD 13: Canals and Cross Drainage Works]



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नहरों में कंकरीट अस्तर बिछाने में जोड़ —
सीलबन्दी यौगिक — विशिष्ट

Indian Standard

**JOINTS IN CONCRETE LINING OF CANALS —
SEALING COMPOUND — SPECIFICATION**

UDC 691.58 : 626.134

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FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Irrigation Canals and Canal Linings Sectional Committee had been approved by the River Valley Division Council.

Joints, where provided in concrete linings on canals are required to be carefully filled and sealed with suitable sealing compound. It should develop an effective adhesive bond to the walls of the joint to which it is applied so that it remains sticking to the lining during the widening of the joint due to contraction in the lining on both sides of the joint. Sealing joint used should be sufficiently deformable to accommodate the amount and rate of movement occurring between the sections of the lining on each side of joint and should resist any tendency to creep down the slope. In addition to the requirements mentioned above it should be durable and should provide water-proof seal at all times under maximum hydraulic head to which the sealed joint is likely to be subjected.

IS 1834 : 1984 'Specification for hot applied sealing compounds for joints in concrete' is used for roads, runways, bridges and other structures. However, sealing compounds conforming to physical requirements laid down in IS 1834 : 1984 does not perform satisfactorily in joints in canal linings because the conditions encountered in canals are different. Hence, in view of the above, this standard has been prepared. These specifications were earlier covered in IS 5256 : 1968 'Code of practice for sealing joints in concrete lining on canals'. While revising IS 5256 : 1968, its coverage has been restricted to Code of Practice and the specification part has been covered separately in this standard, so that, this item could be covered under BIS Certification Scheme.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

JOINTS IN CONCRETE LINING OF CANALS — SEALING COMPOUND — SPECIFICATION

1 SCOPE

1.1 This standard specifies requirements for sealing compound for joints in concrete lining canals.

1.2 This standard does not, however, cover sealing compounds intended for use in sealing joints in concrete roads, runways, bridges and shelter structures for which IS 1834 : 1984 may be referred.

2 REFERENCES

2.1 The Indian Standards listed below are necessary adjuncts to this standard.

IS No.	Title
1203 : 1978	Methods of testing tar and bituminous materials; Determination of penetration (<i>first revision</i>)
1205 : 1978	Methods of testing tar and bituminous materials; Determination of softening point (<i>first revision</i>)
1209 : 1978	Methods of testing tar and bituminous materials; Determination of flash points and fire point (<i>first revision</i>)
1211 : 1978	Methods of testing tar and bituminous materials; Determination of water content (Dean and Stark method) (<i>first revision</i>)
1834 : 1984	Specification for hot applied sealing compounds for joints in concrete (<i>first revision</i>)

3 PHYSICAL REQUIREMENTS

3.1 The physical requirements of the sealing compound shall conform to those given in Table 1.

3.2 Tests shall be carried out as described in the appropriate standard specified in Table 1.

Table 1 Physical Requirements of Sealing Compound

Sl. No.	Characteristic	Requirement	Method of Test
(1)	(2)	(3)	(4)
i)	Softening point, <i>Min</i>	85°C	IS 1205 : 1978
ii)	Penetration at 25°C, 100 g, 5 s, 1/10	15 (<i>Min</i>) 30 (<i>Max</i>)	IS 1203 : 1978
iii)	Flash point, <i>Min</i>	200°C	IS 1209 : 1978
iv)	Pour point, <i>Max</i>	170°C	IS 1834 : 1984
v)	Increase in softening point after heating to 20°C above the maximum pour point for three hours, <i>Max</i>	5°C	IS 1205 : 1978
vi)	Extensibility at 0°C, <i>Min</i>	6 mm	Appendix C of IS 1834 : 1984
vii)	Water content, percent by weight, <i>Max</i>	0.5	IS 1211 : 1978

4 MARKING

4.1 Each container of sealing compound shall be marked with the indication of the source of manufacture.

4.1.1 The product may also be marked with Standard Mark.

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

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